

ADVANCE INDUSTRY QUESTIONS FOR DG-1145 WORKSHOP

18 MAY

CHAPTER 17

QUALITY ASSURANCE & RELIABILITY ASSURANCE

ADVANCE QUESTIONS FOR MAY COLA WORKSHOP DG-1145 SECTION 17.5 QUALITY ASSURANCE PROGRAM

1. General Comment - The industry made a number of significant comments on SRP Section 17.5. The industry has similar concerns about Section 17.5 of DG-1145. See NEI letter dated April 11, 2006.

NRC Response:
Comment noted

2. General Comment - The level of detail that is being proposed for this Section of DG-1145 is normally covered in utility implementing procedures. If this level of detail needs to be in the COL Application there won't be a need for implementing procedures. The industry would expect to have program level information in the COL Application. Utilities typically reference Standards that they commit to in the QA Program Document (QAPD) and not discuss the details contained in the standards in the QAPD. The details of implementation are typically left to implementing procedures.

NRC Response

The purpose of SRP Chapter 17.5 was to place all QA provisions in one place to ensure the quality and uniformity of staff safety reviews. SRP Chapter 17.5 is mainly based on American Society of Mechanical Engineers (ASME) Standard NQA-1 (1994 Edition). The detail in SRP Chapter 17.5 is similar to the detail in NQA-1. As with other chapters in DG-1145, Section 17.5 of the DG was written to be consistent with the latest SRP section. Committing to use NQA-1 would significantly reduce the level of detail in the QAPD. However, in some instances, the NRC cannot reference a standard because there is no standard available.

10 CFR 50.34(b)(6)(ii) requires that the information on the controls to be used for a nuclear power plant include a discussion on how the applicable requirements of Appendix B will be satisfied. The applicant or holder must describe how each of the acceptance criteria is met.

3. General Comment - This Section does not clearly delineate between construction and operational requirements.

NRC Response

ASME NQA-1 is for the construction or operational phase of a plant. The staff found very few QA requirements that were only for construction or operation. In Draft 17.5 (of the SRP) the staff identified provisions that only applied to construction or operation. Public comments on Draft 17.5 identified additional provisions that would only apply to construction or operation that are being incorporated.

4. General Comment B 17. 5.1 Page 7. Provisions are made for an applicant to propose and justify using the existing QA program for its operating Afleet.@ What is the process for using the existing Afleet@ QA program? Are exceptions required to the bases documents of SRP 17.5, since many existing programs are based on earlier guides and standards?

NRC Response

10 CFR 50.34(h) and 10 CFR 52.79(b) require that COL applicants or holders include an evaluation of the facility against the SRP that is in effect 6 months prior to the docket date of the application of a new facility. COL applicants may use an existing QAPD for the operational phase for current use provided that alternatives to or differences from the SRP in effect 6 months prior to the docket date of the application of a new facility are identified and justified.

5. Section 17.5.1 Page 7. A statement is made that an applicant should incorporate the most recently NRC-endorsed standard. For those utilities developing a QAPD based on NQA-1-1994, can provisions be made to accept this standard even though a later version may be endorsed by the time a COLA is submitted? Related to this, does the NRC envision issuing new versions of RG 1.28 and RG 1.33 endorsing later versions of NQA-1 and ANS-3.2?

NRC Response

The NRC does not plan to revise RG 1.28 or RG 1.33. The NRC is reviewing a later version of NQA-1. It is not known at this time when the NRC will be able to approve the later version. COL applicants would not be required use a later NRC-approved version of NQA-1 unless it is incorporated into SRP Chapter 17.5 six months prior to the docket date of the application of a new facility. The NRC does not plan on endorsing a later version of ANS-3.2.

6. Section 17.5.1 Page 8. A requirement is imposed to address planned sharing of personnel for stations that incorporate, or plan to incorporate, other nuclear or non-nuclear power generating facilities. Any planned sharing of personnel would be pure speculation at the time the COL application is submitted. This level of detail is not necessary to implementing the QA program or programs at a respective station.

NRC Response: *The NRC has not completed its evaluation of this comment at this time.*

7. Section 17.5.1.1 Page 8. During the last thirty years there have been a number of items that have been eliminated through NRC and utility review and are not performed in current QA programs. Items 4 and 8 (in line reviews) are examples of this. The NRC should eliminate items in this Section that they have reviewed and approved for utilities to reduce their QA Program commitments.

NRC Response

The staff is conducting a review of QA Program safety evaluations to identify items that have been eliminated and will revise DG-1145 and SRP Chapter 17.5 to be consistent with the safety evaluations.

Compliance with 10 CFR 52.47(a)(1)(ii) and 10 CFR 52.79(b) requires compliance with 10 CFR 50.34(f)(3)(ii) and (iii). The requirements of 10 CFR 50.34(f)(3)(ii) and (iii) are applicable because they require 1) all SSCs important to safety be listed in accordance with

Criterion II of Appendix B to 10 CFR Part 50, 2) independence between organizations performing checking functions and those responsible for performing the function, 3) QA be implemented during construction, 4) QA personnel be included in the documented review and concurrence in quality-related procedures associated with design, construction, and installation, 5) QA personnel be qualified, 6) sizing the staff commensurate with its duties and responsibilities, 7) establishing procedures for maintenance of as-built documentation, 8) providing a QA role in design and analysis activities, and 9) establishing criteria for QA programmatic requirements.

8. Section 17.5.2 and 17.5.1 Note. The first paragraph of 17.5.2 implies that a QAPD submitted for both construction and operational phases must be in accordance with SRP 17.5. However, most COL applicants already have existing nuclear plants with their QAPDs approved under SRP Section 17.3. The Note on 17.5.1 indicates that SRP 17.5 will be used by NRC reviewers not Sections 17.1, 17.2, and 17.3. In light of the above, is the NRC saying that if you have an existing SRP Section 17.3 based on self assessment and performance based assessments, that it can't be used during the operational phase. Current QAPDs are already approved by the NRC and it wouldn't make any sense to have two different QA Programs in the same fleet of plants. Utilities have typically tried to have common program within a fleet of plants. NRC to clarify.

NRC Response

See response to comment 4.

9. Section 17.5.3.B Second bullet. This item suggests that the utility provide and maintain a complete list of SSC components. Industry uses drawings and other means to accomplish this same function. This should be written such that the utility will describe the method to identify SSCs to which the program applies.

NRC Response

The NRC does not agree with this comment. Criterion II in Appendix B in 10 CFR 50 states that the applicant shall identify the structures, systems, and components to be covered by the quality assurance program.

Compliance with 10 CFR 52.47(a)(1)(ii) and 10 CFR 52.79(b) requires compliance with 10 CFR 50.34(f)(3)(ii) and (iii). The requirements of 10 CFR 50.34(f)(3)(ii) and (iii) are applicable because they require 1) all SSCs important to safety be listed in accordance with Criterion II of Appendix B to 10 CFR Part 50. . . .

10. Section 17.5.3.F Bullet 4 B QA review and concurrence on procedures has been removed from current QA programs under approved NRC SERs. Bullet 5 describes periodic procedure reviews. This level of detail is similar to comments in item 2. Bullet 7 should be sufficient to address procedure review and feedback for improvement of procedures.

NRC Response

Text of bullet 4: "Describe controls to identify, prepare, review, approve, distribute, and require the use of new and revised controlled copies of instructions and procedural documents and to control superseded documents."

Text of bullet 5: "Describe the requirements for frequency of periodic reviews, or the controls applied if procedure/document reviews will not be done on a periodic (i.e., every 2 year) basis. Include a description of the criteria and measures to ensure changes, revisions and temporary changes receive the appropriate levels of review by knowledgeable personnel. Include a description of controls for processing minor changes not requiring the same levels of review and approval."

Text of bullet 7: "Describe provisions for systematic review and feedback for improvement of procedures in current use."

The NRC will revise Bullet 4 to be more consistent with 10 CFR 50.34(f)(3)(iii). The requirements of 10 CFR 50.34(f)(3)(iii) are applicable because they require 4) QA personnel be included in the documented review and concurrence in quality-related procedures associated with design, construction, and installation.

The NRC agrees with the comment on Bullet 7 and DG-1145 and SRP Chapter 17.5 will be revised accordingly.

11. Section 17.5.3.P same as item 2.

NRC Response

Same response at item 2.

12. Section 17.5.3.Y This section seems to imply that a utility would put non safety related SSCs into their QA program. This is not required in current operating plant QA Programs. (Note: Unlike draft SRP 17.5.Y.1, DG-1145 does not make the distinction between applicants for passive advanced light water reactor designs or COL holders that choose to implement 10 CFR 50.69, and the other applicants.)

NRC Response

The NRC agrees and DG-1145 should be revised to be consistent with SRP Chapter 17.5.

13. Section 17.5.3.Y There is not much guidance and it is not married well to the SECY 94-084 and 95-0132 RTNSS guidance and it should be.

NRC Response

There is no RTNSS guidance in DG-1145. The NRC is evaluating how to address RTNSS.

14. Section 17.5.3.Y There is no explicit mention of Availability controls. The expectation was that this section would provide us with the answer as to where we put RTNSS Availability Controls. Currently D-RAP, O-RAP, and Maintenance Rule are part of 17.4 and 17.6. RTNSS controls can make sense here. (Although in AP1000 they are in Table 16.3-1) Recommend the actual ASpecs as an Appendix to Chapter 17, or IBCRef within 17.4 to an external document (e.g., current fleet ATRM like document).

NRC Response

See response Comment 13.

15. Section 17.5.3.Z This section is not clear. Does this mean Nuclear Safety Review Board, Independent Safety Engineering Group (ISEG), etc. Additionally, some utilities have eliminated this requirement in their QA Program. This was achieved through NRC reviews and SERs. Are we locked into the DG-1145 independent review process or can we use an existing approved process?

NRC Response

NRC safety evaluations have approved revisions to independent review program requirements but have not approved the elimination of independent review programs. Draft 17.5 provides detailed guidance on independent review which would allow a Nuclear Safety Review Board or ISEG to conduct independent review activities.

16. Section 17.6 Does this imply that the maintenance rule systems are scoped into the QA Program.

NRC Response

Not necessarily. There is no Maintenance Rule requirement to include SSCs that are in MR scope as defined in paragraph 50.65(b) in a QA program. Conversely, there is no requirement in Appendix B to include the SSCs within its scope, i.e., safety-related SSCs, in the MR program. However, there are SSCs that by virtue of their being safety-related happen to be included in both MR scope under paragraph (b)(1) and Appendix B scope. In addition, SRP 17.5 states that in passive designs, high-safety-significant SSCs that are non-safety-related should be covered by a QA program of some sort. There will likely be non-safety-related SSCs in the MR scope under paragraph (b)(2) that are classified as high-safety-significant under the MR program. Therefore, there may be non-safety related SSCs in the MR scope that happen to be under a QA program as well because of being high-safety significant and part of a passive design, but not because of being in the MR scope.

17. It is not clear exactly what needs to be in the COLA and what can simply be in the QAPD.

NRC Response

The QAPD (construction and operation) would be included in the COL application. SECY-05-0197 requires that all operational programs be fully described in a COL application.